ARMY GROUND RISK MANAGEMENT INFORMATION

Countermeasure

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Any mission, any time, any place...

Safety is Readiness

FIRST PRIORITY

Countermeasure

ARMY GROUND RISK-MANAGEMENT INFORMATION

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DASAF's CORNER

From the Director of Army Safety

Safety Is Readiness First Priority

While some of us were fortunate enough to enjoy the holiday season with family and friends, many of our fellow soldiers continued to hold the torch high and execute real-world missions around the globe. Wherever you were, I hope yours was a safe one. Even with all its hustle and bustle, the holiday season isn't just a time of joy and celebration, it is also a time of somber reflection and a time to contemplate future challenges.

The year 2001 will not soon be forgotten. The indescribable horrific acts of cowardice that wrought violence, destruction, and pain on thousands of innocent people are burned into our memories forever. On September 11th, our hearts broke. But the attacks on our homeland rallied our spirit as Americans, and solidified our determination to do whatever was required to eradicate terrorism and make the world a safer place for all who value freedom and security. The year 2001 marked the beginning of a new kind of war against a new asymmetric enemy. The challenges ahead of us are many.

As an Army, readiness to respond to whatever missions we are asked to do is priority one. In January of each year, we habitually put the final touches on OPORDS and training plans that have been working since the early fall. We continue to refine and begin to execute METL training, attend schools, combat training center (CTC) rotations, and Reserve Component annual training (AT) events—all in an effort to further hone our warfighting skills and improve our readiness. I submit to you, however, that before the first aircraft can pull pitch, the first tank can roll out of the motor pool, or the first parachute canopy can inflate, we must ensure we have fully integrated risk management into our plans. Incorporating risk management into plans and operations significantly enhances readiness by reducing accidental losses. The loss of any soldier, or damage to any piece of Army equipment, seriously impacts our readiness and ultimately our ability to fight and win this war on terrorism.

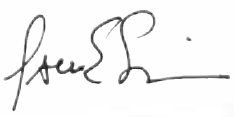
The fact that we lost 169 soldiers in accidents during FY01 clearly reinforces that we are part of an inherently dangerous profession where soldiers willingly put themselves in harm's way every day to protect our freedom. At some level, we are all leaders. And as leaders, we have a responsibility to identify hazards that could potentially cause our fellow soldiers to be hurt or killed. A leader's ability to concentrate finite resources at the critical place and time to destroy the enemy is crucial to battlefield success. Similarly, our ability as leaders to recognize hazards, and put controls in place to reduce risk, is paramount to winning the war against accidents and preserving resources for warfighting on the battlefield. While eliminating all risk may be impractical, technically and tactically competent leaders making informed decisions at the appropriate level will significantly enhance the Army's readiness.

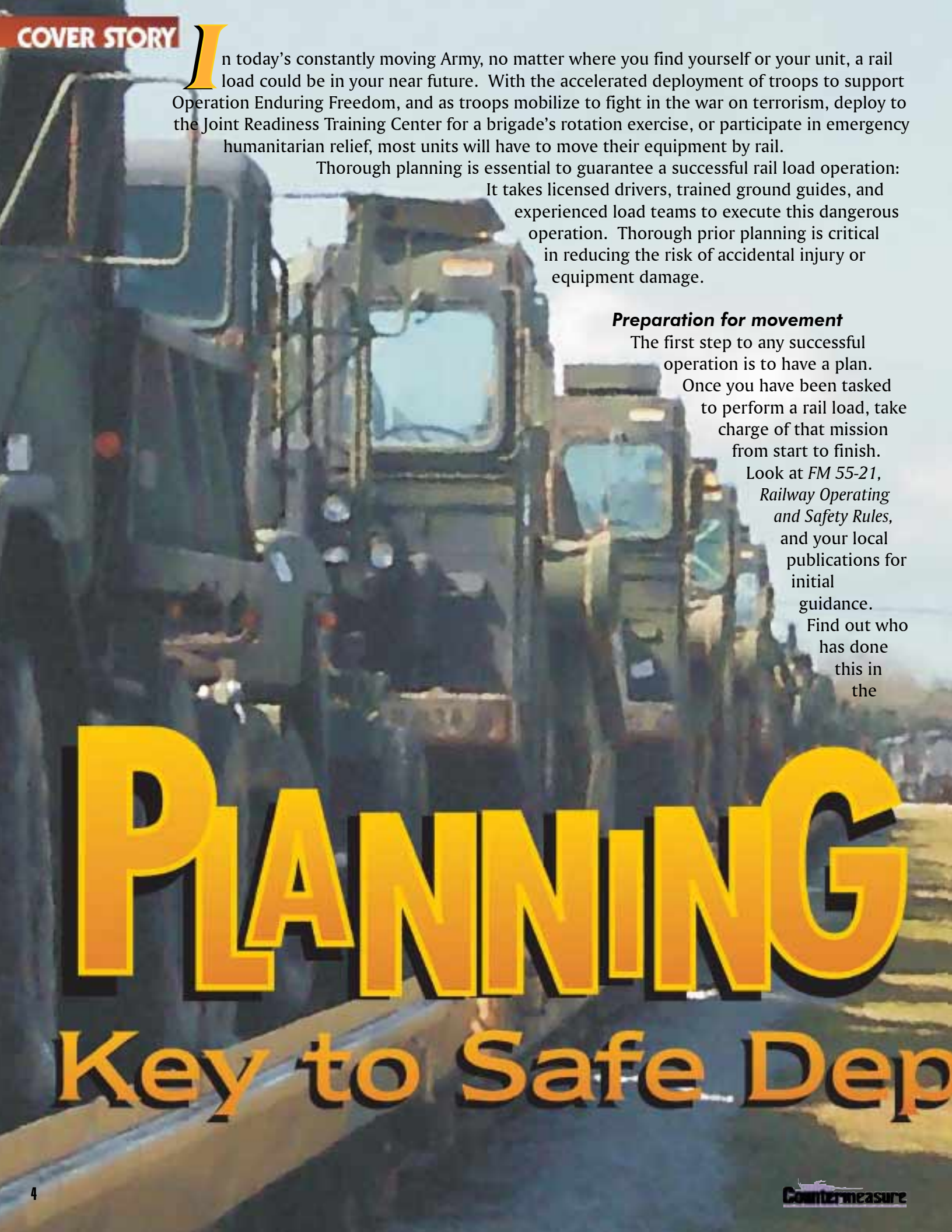
For a unit to successfully fight as a cohesive combat force, leaders must take the time to ensure safety and risk management are integral parts of all plans and missions. Effective leaders will not allow their subordinates to cut corners, take unnecessary risks, or ignore potential hazards. True leaders will apply the same risk management standard of an informed decision at the appropriate level to both combat and training missions.

Command involves accountability. It's hard enough knowing that you will potentially lose soldiers to enemy fire, but the thought of losing soldiers needlessly because of inattention, indiscipline, or the failure to mitigate risks to the lowest level possible ought to be every leader's worst nightmare.

I challenge each of you to continue to inculcate solid risk management in all that you do, both on and off duty, in garrison and in the field. Our soldiers are counting on you to lead the way. Remember, safety and readiness go hand-in-hand.

— BG James E. Simmons





PLANNING
Key to Safe Dep

In today's constantly moving Army, no matter where you find yourself or your unit, a rail load could be in your near future. With the accelerated deployment of troops to support Operation Enduring Freedom, and as troops mobilize to fight in the war on terrorism, deploy to the Joint Readiness Training Center for a brigade's rotation exercise, or participate in emergency humanitarian relief, most units will have to move their equipment by rail.

Thorough planning is essential to guarantee a successful rail load operation: It takes licensed drivers, trained ground guides, and experienced load teams to execute this dangerous operation. Thorough prior planning is critical in reducing the risk of accidental injury or equipment damage.

Preparation for movement

The first step to any successful operation is to have a plan. Once you have been tasked to perform a rail load, take charge of that mission from start to finish. Look at *FM 55-21, Railway Operating and Safety Rules,* and your local publications for initial guidance. Find out who has done this in the

past within your organization. If no one has, ask other units or the installation transportation and safety offices for assistance. Look for past operations orders and after-action reviews to help you arrange and correct any problems that other units had in the past.

The next step is to find out what needs to be moved and how much equipment is going to be deployed. Finally, find out how much time you have to train personnel prior to the operation. Develop the plan, brief the plan, rehearse the plan, then execute the plan.

Movement to port of embarkation (POE)

The next step to incident-free rail load operations is to acquire trained drivers for the vehicles to be moved and loaded onto the railcars. Do you have qualified and current drivers to accomplish this mission? Have these soldiers ever driven a vehicle on a ramp or onto a narrow railcar? Do they know the proper use of hand and arm signals while they are moving that vehicle into position? If the answer is "No" to any of these questions, then you need to adjust

loyment

your training plan to accomplish this training prior to the event.

Ground guides are the eyes and ears for those vehicle drivers moving equipment. They must be trained on proper hand and arm signals; *FM 21-60, Visual Signals*, is the manual that provides the guidelines for these signals. Require and enforce the use of ground guides for all vehicle movement around the railhead, not just on the railcars. Never allow a ground guide to walk backwards on the railcars or ground guide from a railcar that contains a moving vehicle.

Actions at POE

The load teams are your final step to a successful load. They must secure the load properly and be trained on how to complete this mission to standard. Require and enforce that the load team uses the proper personal protective equipment (PPE). At a minimum, this should include Kevlar, reflective vests, and all-leather gloves. Train the teams on proper use of tools, blocking, lashing, and spanners. Inspect tools and tow bars for serviceability before using the equipment. When working with military combat vehicles that have turrets that traverse, ensure the turret is immobilized by using the vehicle's travel locking mechanism with cables that extend to both sides of the gun, or both.

As with any operation, there are inherent risks associated with the mission. In rail load operations, there are no exceptions. General precautions that should be considered are power lines in and around the rail load areas. Ensure that antennas and other objects protruding from military equipment cannot come in contact with overhead electrical power lines.

The weather should be checked at least 48 hours prior to the operation and hourly once the rail load begins. Rain, snow, and sleet could seriously change the procedures that you will use in and around the rail load site. Your continuous risk management steps should take into account the changes in weather.

Medical teams should be coordinated for and pre-positioned in the rail load area. Ensure an evacuation plan is developed and briefed to all personnel involved with the mission. A word of caution: Never tolerate horseplay or sleeping in the rail load area. If you, as a leader, allow this to occur—you are setting yourself up for failure, and that failure could cost a soldier's life. Rail load operations are serious business, take action to mitigate the risk. A successful rail load operation starts with you.

Finally, be a leader. If you are in charge, take charge and do the right thing. Demand performance to standards and take quick, effective action when standards are violated.

POC: CW4 Anthony M. Kurtz, Risk Management Integration Division, DSN 558-2781 (334-255-2781), kurtza@safetycenter.army.mil

For Successful RAIL LOAD Operations:

- Develop and execute your plan; take charge of the mission.
- Ensure all drivers/operators are trained to standard and licensed IAW AR 600-55.
- Ensure drivers and ground guides are trained and proficient on hand and arm signals.
- Pre-inspect all equipment and vehicles prior to deployment. Load teams must be trained on the proper use of tools, blocking, lashing, spanners and tow bars.
- Implement and monitor crew rest (Fighter Management Plan).
- All personnel must enforce the use of PPE during the course of the mission.
- Other considerations include adverse weather, hazardous roads, and local policies.

I recently conducted a review of a motor pool operation and I was shocked with the lack of chocks in use for the vehicles. The motor pool was situated with sloping terrain and only a couple of vehicles had chocks. This creates a significant hazard for personnel, and increases the potential for loss or damage of equipment.

Some important requirements for parking an unoccupied vehicle include properly setting the parking brake. For diesel vehicles: the gear selector should be in the neutral position for standard transmissions, and in park for automatics.

CHOCKING & SECURING
UNATTENDED VEHICLES

There have been several soldiers killed in the past by a vehicle that was not properly chocked, and subsequently ran over a soldier or crushed him between two vehicles. For example, in FY 2000, a CUCV was parked but was not chocked or the parking brake set. The unattended vehicle rolled through a parking lot and struck a pole, resulting in $3800 damage to the vehicle. Luckily, there were no injuries.

Imagine this same event in a busy parking lot with a lot of people! This accident is an example of what can happen when drivers get in a hurry and do not take the time to follow standard procedures.

AR 385-55 is very specific about chocking and setting parking brakes when leaving vehicles. Chapter 2-16, Paragraph I states: "All military vehicles will be equipped with chocks and use chocks when parked on inclines or whenever or wherever maintenance is being performed." This is the minimum standard and I recommend units consider chocking their vehicles whenever the driver is out of the cab. This provides increased safety against a rolling vehicle, and forces the driver to walk around the vehicle and pull the chocks prior to departing.

This increased awareness is the same rationale used by the major utility companies which require their vehicle drivers to setout perimeter safety cones around the vehicle before leaving it unattended. Review your unit's SOP today and ensure it meets or exceeds the requirements for chocking and securing unattended vehicles. You just might be preventing your unit's next accident.

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Take Proper Precautions When Servicing Split-Ring Rims

Since FY95, there have been 25 recorded accidents as a result of performing maintenance on tires with split ring rims. Across the Army, that may not seem significantly high, but one accident is one too many, especially since all of these accidents could have been prevented.

But what if we included the near misses? Near misses are incidents that involved a close call, but no serious injury resulted, so it wasn't reported. The number of accidents would be extremely high if we included the near miss data.

Throughout the Army, split-ring rims have been used on various models of equipment for many years—from the 2½-ton M35 to the 10-ton M978 Heavy Expanded Mobility Tactical Truck (HEMTT). The newer models, such as the family of medium tactical vehicles (FMTVs), use bolt on solid rings. In accordance with OSHA 29 CFR 1910.177, equipment operators and maintenance personnel must be properly trained on the different types and the potential hazards associated with servicing multi-piece rims.

For the last 5 months, I have been assigned to the Risk Management Integration training team. During this time, we have visited seven different Army installations and provided soldiers with risk management training. As part of our training, we conducted safety surveys in several maintenance facilities. In each of these facilities, we noted serious potential hazards associated with soldiers performing tasks as simple as inflating a tire, or as complex as demounting and mounting tires. Some of the potential hazards that were noted include:

- **Operators not trained.**
- **Technical manuals not available.**
- **Inflation gauge with a 10-foot air hose and clip-on chuck not available or being used.**
- **Operators using a pickaxe to separate the bead from the rim.**
- **OSHA-approved tire cage not available.**
- **Maintenance personnel not trained on servicing multi-piece rims or the training wasn't documented and filed.**
- **Tires mounted on the equipment were being inflated when the tire had less than 80 percent of air pressure.**
- **Tire cages bolted to the floor.**
- **Known standards not being enforced.**

How can we eliminate or reduce these hazards? Through leadership! As leaders, we know that our soldiers have to be trained and resourced to safely accomplish any given task under any situation. Who can assist us with this training? Contact your local logistics assistance representative (LAR). They can train or assist you in establishing a multi-piece rim training program tailored to your operation. Keep in mind, once the training program is established, it might be a good idea to include it as part of the unit's drivers' training program.

What resources do we need to provide soldiers so that they can safely service multi-piece rims? In most cases, the minimum resources to safely service multi-piece rims include:

- **Eye protection.**
- **Hearing protection.**
- **OSHA approved tire cage (NSN 4910-01-373-0267); larger approved tire cage (NSN 4910-00-025-0623).**
- **Inflation gauge with 10-foot air hose and clip-on chuck (NSN 4910-00-441-8685).**
- **Mechanical bead breaker (NSN 4910-01-325-2974).**
- **Valve stem remover.**
- **Applicable tire tools.**
- **Equipment technical manual.**
- **TM 9-2610-200-14, *Care, Maintenance, Repair, and Inspection of Pneumatic Tires and Inner Tubes.***

Split-ring rims can be extremely dangerous if not properly serviced and maintained by trained personnel. Let's not lose another life or limb as a result of shortcuts taken, standards not enforced, or resources unavailable.

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Sports Injury Prevention- Key to Combat Readiness

We all know that physical readiness is a vital part of Army life and critical to combat readiness. Participating in sports and recreational activities, as well as physical training, is the most popular way soldiers can choose to maintain physical and mental fitness, as well as build unit esprit de corps.

Unfortunately, it's not all fun and games. Already this fiscal year, Army men and women have experienced a variety of injuries.

- A soldier twisted his ankle when he caught his ski tip on a root/stump just below the new snowfall.
- Another soldier lost his balance while snowboarding, and tried to break his fall with his hand, resulting in a compound fracture to his upper right arm.
- A battalion was participating in an evening basketball game. One soldier was backpedaling on defense and made contact with another individual, causing a fall. Consequently, this caused a pileup that resulted in the soldier breaking his right femur.
- A soldier was participating in an off-duty recreational football game when he was struck in the jaw by another soldier. He later went to the emergency room for x-rays which revealed he had a broken jaw and dislocated some teeth. The soldier had his jaw wired shut, was hospitalized for two days, and placed on convalescent leave for 14 days.

Sports and recreational accidents rank third behind privately owned vehicle (POV) accidents and combat soldiering as a major cause of accidental injury. Sports injuries vary, but the majority involves the ankles, feet and lower legs.

Most sports activities involve a small element of danger: physical exertion, physical contact, and quick decisions followed by fast action. When soldiers are injured, that directly impacts the Army's ability to accomplish its mission. Can any mission afford this? What can we do to reduce sports injuries?

FM 21-20, Physical Fitness Training, outlines the principles of exercise. These principles are important for developing an effective physical fitness program. A structured program, in conjunction with proper equipment and good leadership, can minimize the risk of soldiers sustaining injuries.

A soldier's main job hinges on his ability to be able to function well in combat. It is the leader's responsibility to make sure his soldiers are prepared at all times. There is no single or simple solution to prevent sports injuries, but they can be reduced. Leaders at all levels must be familiar with the hazards associated with sports activities, and ensure their soldiers follow these guidelines:

	Accident Count	%
Basketball	49	31.01%
Football	28	17.72%
Skiing	12	7.59%
Softball	12	7.59%
Soccer	8	5.06%
Swim	8	5.06%
Bicycle	7	4.43%
Horseback riding/rodeo	7	4.43%
Boating	4	2.53%
Parachuting	4	2.53%
Running	4	2.53%
Volleyball	4	2.53%
Frisbee	2	1.27%
Rappelling	2	1.27%
Skating	2	1.27%
Wt lifting	2	1.27%
Hockey	1	0.63%
Hunting	1	0.63%
Paint Ball	1	0.63%
Other		17.09%
	158	

- **Warm up before participating in any sport.**
- **Master the techniques of the sport.**
- **Stay in good physical shape.**
- **Be adequately equipped.**
- **Know and practice the safety rules of the sport.**

Effective leadership is a critical factor in the success of a good physical training program. We, as leaders, must emphasize the value of physical training, clearly explain the objectives and benefits of the program, and demand that it be accomplished to standard. It is important that the Army stays physically fit and prepared to complete its mission.

Combat readiness is the responsibility of not only the unit leaders, but the entire Army family! We must be fit in body and mind, and ready to fight and win on the battlefield!

A Cold Night in Saudi Arabia

I was assigned to a CH-47 Chinook Helicopter Company in Saudi Arabia in support of Desert Shield/Desert Storm. The Sixth Cavalry arrived in country in December 1990. We knew we were in trouble from the start as the flight attendant gave us blankets from the plane and said, "Don't worry, we'll come back for you." That's when I gave myself up for dead and figured anything else would be a bonus.

Our company (16 Chinooks from Fort Hood) deployed forward the day before the Air War started. Three other flight crews and I remained at the heliport trying to resurrect our broken Chinooks back to life.

The first thing you learn as a Chinook pilot is trusting your crew chief, and they were performing up to par. We brought our four Chinooks back to life and were told to follow our sister company.

Great plan, but we did not have any night vision goggles (NVGs) onboard. Day turned into night, and we followed a sistership (goggle-equipped) into the desert blackness. You get a whole different perspective on your first flight into Saudi Arabia flying unaided following a goggle-equipped aircraft.

Our rally point for the start of the war was along a stretch of road. Little did we know that high-tension lines (helicopter catchers) inhabited the side of the road. Our four Chinooks finally landed in every direction but vertical, but we didn't damage a single one. The next day was the start of the Air War.

As we were flying to rejoin our unit, we noticed a convoy suddenly depart their vehicles and quickly don their protective mask. This was our first test in crew coordination "mopping" procedures. We arrived at our destination 20 kilometers to the south of KKMC, Saudi Arabia, and rejoined our unit later that day. After a few days without a shower, we were ready. Cold water was never a great way to take a shower in the dead of winter, especially in the desert at night. Brrrrrrr!

Thus, the pot belly stove, a 5-gallon metal water can and the Australian shower came to our rescue. This was great. I was looking forward to a nice, hot shower. We placed the water can on the pot belly stove and heated the water before pouring it in the Australian shower. "Life was good."

One of our other tent mates (another pilot) decided that it was time for his shower. He located a water can and placed it on the pot belly stove. The other pilots in the tent were busy flight planning. My cot was about three feet from the stove. About 5 to 10 minutes later, one of our pilots asked, "Does anybody smell gas?"

It did not take long to find the source of the gas vapors. Our dusty and smelly tent mate had gone out into the night, located a 5-gallon **gas** can, which looked very similar to the 5-gallon metal water can, and placed it on the stove. You can indeed cook gas. We promptly removed it from the stove and thanked God for sparing our lives. A good safety point is to check the writing on the can before use.

As I looked up into the dark along the stove pipe hole in our GP Medium tent, I was thinking about the events of the past day when suddenly I saw a line of sparks like a Fourth of July rocket, followed by an explosion. This was our introduction to the Scud missiles.

Some days, it doesn't pay to get out of bed, I guess.

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ACCIDENT BRIEFS

Information based on preliminary reports of ground accidents.

Personnel Injury

■ A PFC collapsed while participating in a demonstration on the obstacle course horizontal ladder. All attempts at reviving the soldier failed. He was transported to the local medical facility where he was pronounced dead. It was later determined he suffered from a preexisting medical condition.

■ A SSG was attempting to place a mobile home on a new site. The soldier's home collapsed on him.

■ Three soldiers returning home from training were fatally injured when their rented private airplane crashed.

■ A SGT lost his finger when he tried to tighten the alternator fan belt while his vehicle was still running. When he pulled his right hand out, his middle finger was caught by the belt, and pinched between the belt and pulley. Soldier was taken to the local hospital, where it was determined that the fingertip was not viable for reattachment. He lost his middle finger to the first knuckle.

POV

■ Three soldiers were traveling on a county road. The driver (PVT) ran off the road and hit a tree. The driver survived, however his passengers, a PFC and another PVT, were killed.

■ A SPC failed to negotiate a curve and overturned his car, killing himself and his passenger, another SPC.

■ While operating a motorcycle, a SSG ran off the road and collided with a guardrail. Soldier was fatally injured.

AMV

■ Two recruiters were en route to pick up a new recruit for induction when another vehicle ran a red light and struck their vehicle in the driver's door. The driver (SSG) was not wearing a seatbelt and was fatally injured. The other recruiter (also a SSG) was wearing a seatbelt and was treated and released.

■ An M978 fuel tanker contacted the main rotor blade of a parked UH-60L aircraft during refueling. Preflight inspection of the aircraft on the following day revealed damage to the main rotor system. Damage was later found on the tanker.

ACV

■ A HEMTT was proceeding in a convoy movement when, for unknown reasons, it was observed to veer off the left-hand side of the road, down an approximately 15-foot embankment. The vehicle came to rest inverted in approximately 3-4 feet of water (stream). The TC was able to egress, however the driver drowned.

■ The casings of two 25mm rounds exploded while stored on the flooring next to the heater of the M2A2 Bradley Fighting Vehicle (BFV). All three occupant crewmembers sustained injuries and were treated and released. One crewmember sustained a more severe injury to one thumb for which he was hospitalized for surgical treatment.

■ An M88 tracked recovery vehicle and towed M2A2 BFV struck two civilian vehicles while in traffic during convoy movement. The tow bar retaining bolt reportedly dislodged from the left tow bar attachment shoe on the M2A2, and loss of operator control ensued. Eight civilian vehicle occupants sustained injuries; five were treated and released, two were hospitalized with serious, but not life-threatening injuries; one sustained life-threatening head injuries and remains on life-support.

Other

■ During M72A2 Light Anti-Tank WPN (LAW) training, one LAW round was determined to have been a "dud." The round detonated during EOD procedures to destroy it (while emplacing the detonation charge). One soldier died, one soldier sustained serious injuries, and the third soldier sustained minor injuries.

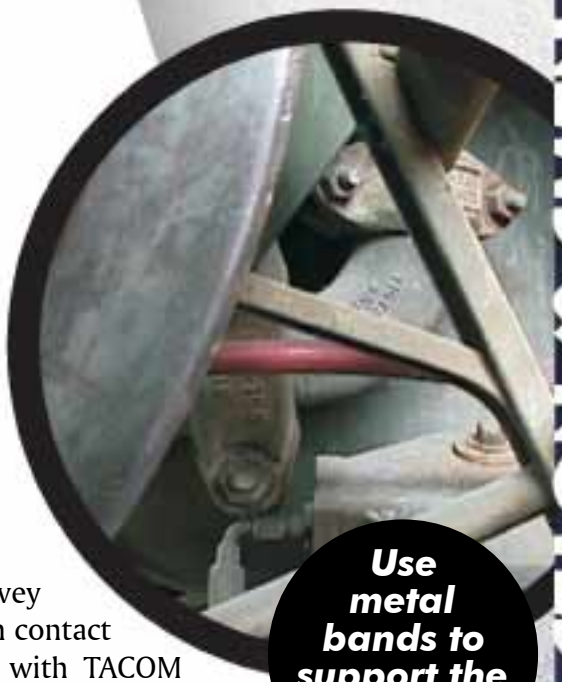
A Few Words About Anthrax

There is so much information on anthrax available to the public, it is not necessary to restate it here. However, one point that should be made clear is the safety professional's role in an anthrax situation is one of assistance. We must remember our mission of accident prevention. Sending an anthrax-laced letter through the mail is clearly not an accident. We must always be available to assist with providing information and clarify questions that arise concerning this threat.

An excellent web site for finding various types of information on anthrax is the U.S. Army Center for Health Promotion and Preventive Medicine, **http://chppm-www.apgea.army.mil**. Here, you can find fact sheets and medical information, as well as information for the medical community, HQDA messages, PPE guidance, and detailed instructions on mailroom anthrax sampling procedures for individuals who are responsible for such activities. Another good web site for information and links to additional web sites, such as the Centers for Disease Control and Prevention is DENIX, Defense Environmental Network and Information Exchange at **http://www.denix.osd.mil**. You must, however, apply for a password before you can access the DoD menu at this site.

POC: LTC Heidi Overstreet, USASC Industrial Hygienist, DSN 558-2477 (334-255-2477), overstrh@safetycenter.army.mil

Surfacing Leaks in the Tanker Fleet



Use metal bands to support the pup joint.

One problem we are continuing to see surface on FORSCOM Aviation Resource Management Survey (ARMS) is the HEMTT Tanker (M978) fuel-line elbow being in contact with the V5 valve. There is a problem of compliance with TACOM Safety of Use Message (SOUM) 94-07, partly because an illustration was not provided. Since then, the Army Petroleum Center has obtained a TACOM illustration on how to solve the problem (see below).

The key to the solution is cutting off the bolts at the jam nut, and use metal bands (2 each) to support the pup joint (see illustration). If the bolts have already been cut off, and you do not use the metal bands, the fuel-line elbow over time will drop onto the coupler, or onto the valve itself. This can start chaffing until a groove is worn into the elbow. If uncorrected, it eventually will cause a hole to be worn in the fuel-line elbow, causing a fuel leak and potential fire.

Help us get the word out. Regardless of whether it's an aviation or ground unit in non-compliance, if a leak occurs—it becomes an environmental and a safety issue. Have your maintenance and POL folks ensure compliance with TACOM SOUM 94-07.

POC: Jim Lupori, U.S. Army Petroleum Center, DSN 977-6445 (717) 770-6445, jlupori@usapc-emh1.army.mil

Non-compliance with TACOM SOUM 94-07 could lead to this.

Is Your Eyesight Worth Not Wearing Your Safety Glasses?

A Boeing employee began encouraging his 18-year old son, who installs siding on houses, to wear safety glasses. His son was resistant and stated that he did not need them and that he felt he wasn't going to get hurt. On one occasion, his son got aluminum dust in his eyes while cutting gutter material. The father told his son that safety glasses would keep the dust out of his eyes. His son finally gave in and started wearing them.

A week or two later, the son was applying siding with an air-powered staple gun. When he fired a staple, it hit a metal plate behind the siding and it ricocheted back towards his face. One leg of the staple penetrated the safety glass lens. It hit with such force that the frames were cracked. Fortunately, he only received bruising on the eyebrow and cheekbone from the impact. The safety glasses definitely saved his eyesight, and possibly his life!